ITD D6 GIBBONSVILLE EMPLOYEE HOUSING SITE DEVELOPMENT

SHEET TITLE:

COVER SHEET

DRAWING SCALE APPLIES

TO 22" X 34" SHEET SIZE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN or IMPLIED

DO NOT DISTRIBUTE PARTIAL SETS O

ARCH. JOB NUMBER: 22589

DBS STAMP

MAY 2023 G100

DRAWING INDEX

SHEET TITLE

COVER SHEET

ARCHITECTURAL SITE PLAN

OVERALL FLOOR PLANS

FOUNDATION PLAN

MECHANICAL PLANS

MECHANICAL PLANS

ELECTRICAL SITE PLAN

ONELINE DIAGRAM & TRENCH DETAIL

COVER SHEET

POWER PLAN

SHEET NUMBER

G100

P1.0

E0.0

SE1.0

E1.0

E2.0

GENERAL SHEETS

SITE PLANS

FLOOR PLANS

STRUCTURAL

ELECTRICAL

MECHANICAL AND PLUMBING

CIVIL

GIBBONSONVILLE, ID

ABBREVIATIONS ACOUSTIC CEILING PANEL SYSTEM HEATING, VENTING & AIR CONDITIONING AIR CONDITIONING INSULATION INTERIOR LAMINATED LOCATION LARGE MASONRY MAXIMUM BLDG CABMANUFACTURER

NOT APPLICABLE

NOT TO SCALE

PRESSURE TREATED

PART BRD PARTICLE BOARD

PLYWOOD

POWER

REQ

STOR

TOF

STRUCT

ROOF DRAIN

REFERENCE

REQUIRED

SHEATHING

SPECIFICATIONS

SANITARY SEWER SOLID SURFACE STAINLESS STEEL

SIMILAR

SQUARE

STORAGE

STRUCTURAL

SUSPENDED TEMPERATURE

TERMINATION

TOP OF FOOTING

ROOM

REINFORCEMENT

ON CENTER OR CENTER LINE

REFLECTED CEILING PLAN

OWNER FURNISHED - CONTRACTOR INSTALLED

CLR COL CONC CONCRETE **CONTINUOUS**

DEMO DRINKING FOUNTAIN DISP DOOR

DWG

HORIZ

DWR EXHAUST FAN **EXPANSION JOINT EMER**

FLOOR DRAIN

FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FINISH FLOOR

GALV HOLLOW CORE **HOLLOW META** MANUFACTURED HOME UNIT

TOP OF BEARING **TYPICAL** VERTICAL VINYL TILE WITH WITHOUT WOOD WATER PROOF

SYMBOLS

<u>NEW BLDG. GRID</u> DOOR NUMBER WINDOW MARKER **ROOM NUMBER** W3A **CEILING TAG** CLG. HT #'-#" —· – ELEVATION

DETAIL NUMBER 3/A200 🛕 **DETAIL CUT** SHEET NUMBER SECTION NUMBER ----- SHEET NUMBER BLDG. ELEVATION

— ELEVATION NUMBER SECTION LETTER **BLDG. SECTION** - SHEET NUMBER ELEVATION NUMBER WALL ELEVATION

SHFFT NUMBER 3/4" = 1'-0" SHFFT NUMBER

= EXISTING

= NEW CONSTRUCTION

= ADD ALT (SCOPE)

= DEMOLITION

BUILDING DESCRIPTION

MANUFACTURED HOME UNIT(S) ARE PURCHASED BY THE OWNER (ITD). THE MANUFACTURED HOME PROVIDER WILL DELIVER THE UNIT(S), HOOKUP THE UNIT(S)

PAD WITH NEW MECHANICAL, PLUMBING AND ELECTRICAL PER THE DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW FULL JURISDICTION or IDOPL PERMITTING REQUIREMENTS.

BLDG. INFO.

ACTUAL MHU AREA: OCCUPANCY CLASSIFICATION: (R) Residential (Manufactured Home)

one single, nation-wide standard (24 CFR §3280) under authority of the National

Manufactured Housing Construction and Safety Standards Act of 1974, signed into

PERMITTING THROUGH IDOPL (IDAHO DIVISION OF OCCUPATIONAL AND PROFESSIONAL LICENSES), REQUIRED PERMITTING:

INSTALLATION PERMIT and INSTALLATION TAG ON-SITE MECHANICAL, PLUMBING AND ELECTRICAL PERMITTING REF. INFO AT: idahohousingassociation.org dbs.ldaho.gov

LOCATION MAP



CONSULTANTS

STRUCTURAL ENGINEER

FROST STRUCTURAL ENGINEERING 1020 LINCOLN ROAD IDAHO FALLS, IDAHO 83401

ELECTRICAL & PLUMBING ENGINEER

CIVIL ENGINEER

690 INDUSTRY WAY, SUITE 10

CONTACTS

OWNER

IDAHO TRANSPORTATION DEPARTMENT (ITD) 11331 WEST CHINDEN BLVD. BOISE, IDAHO 83714 CONTACT: JACOB JACKSON EMAIL: jackob.jackson@itd.idaho.gov

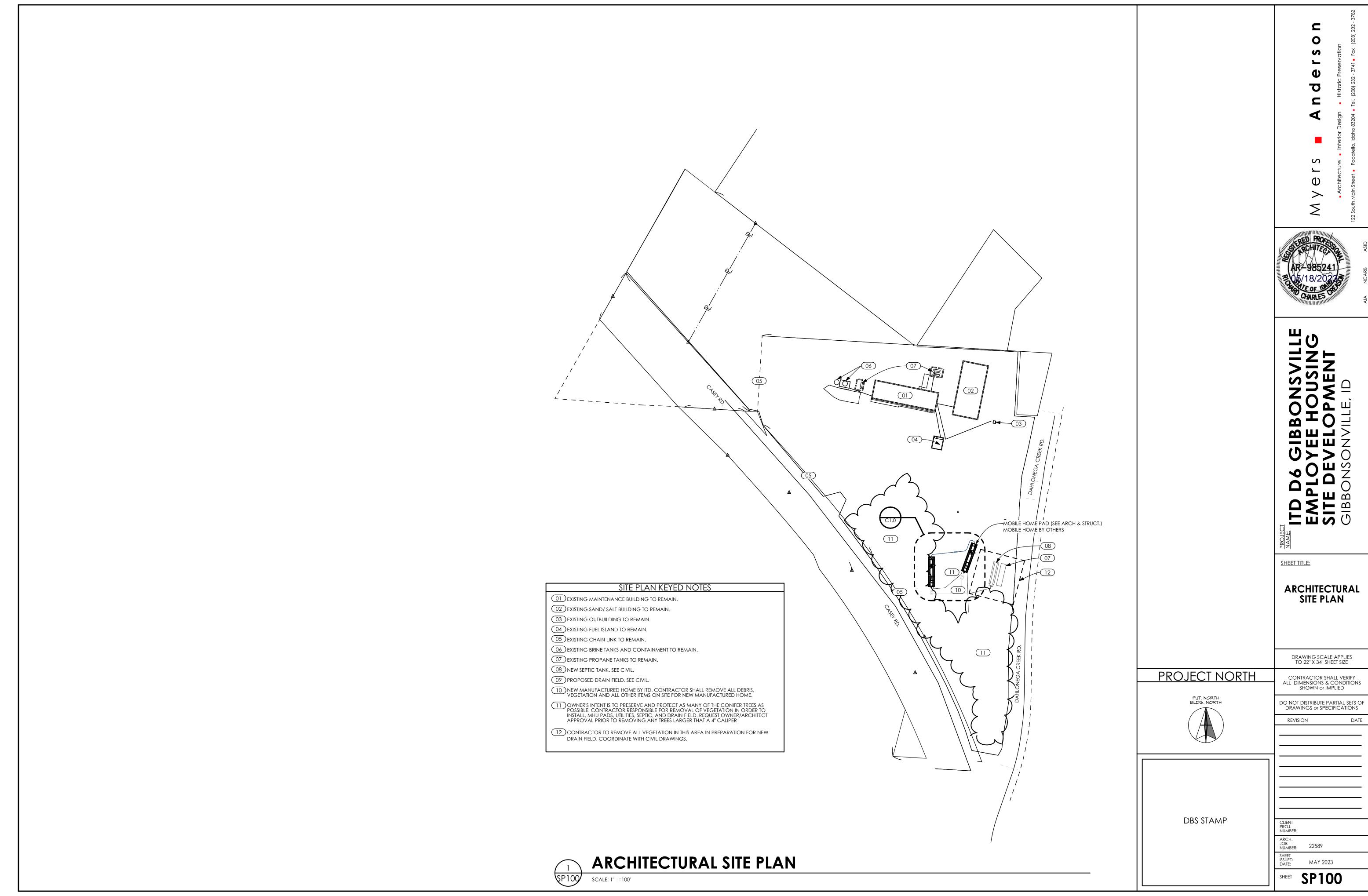
ARCHITECT

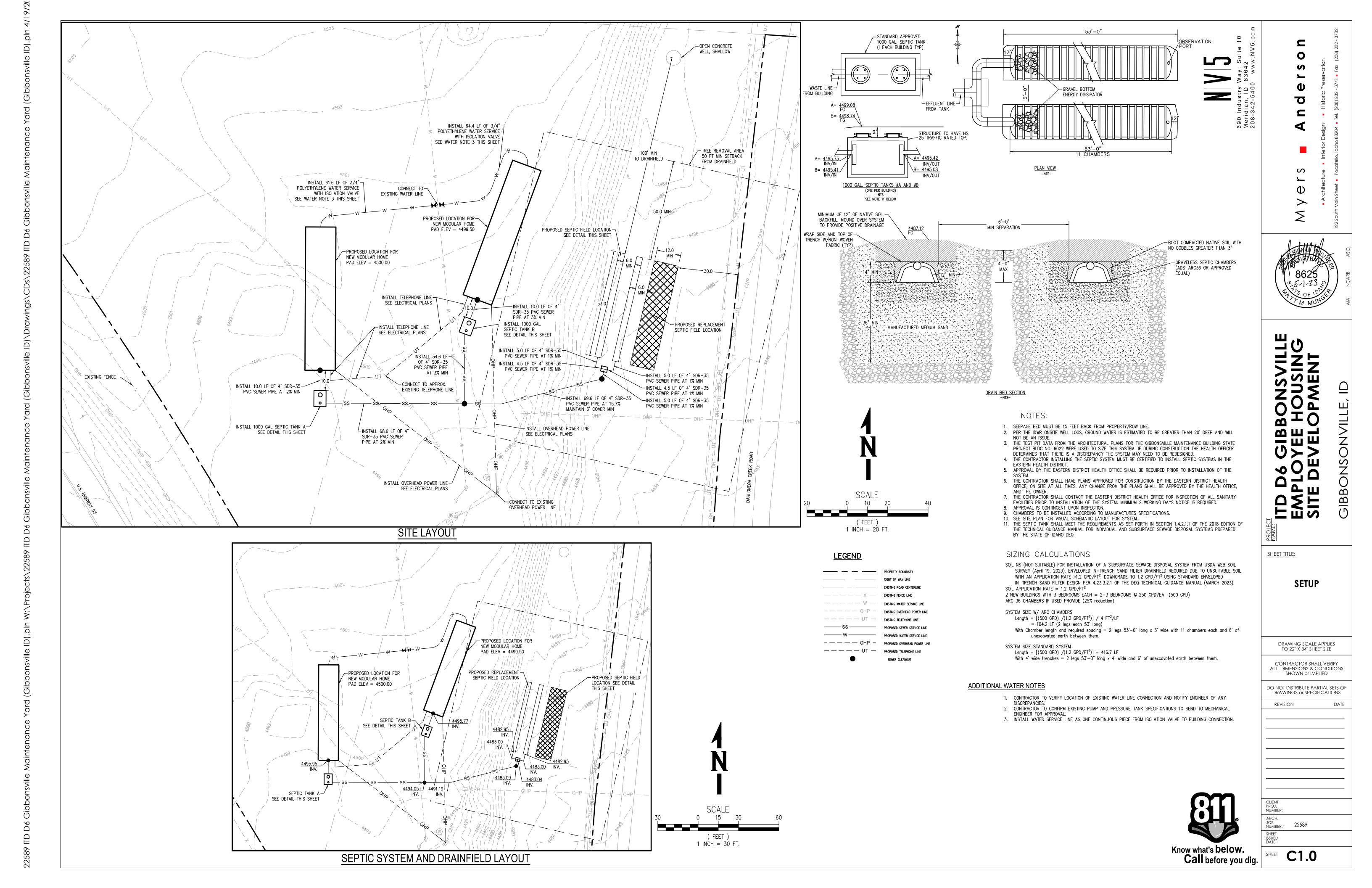
RICHARD CREASON 122 S. MAIN STREET SUITE 1 POCATELLO, ID 83240 PH: 208.232.3741 E-MAIL: richard@myersanderson.com

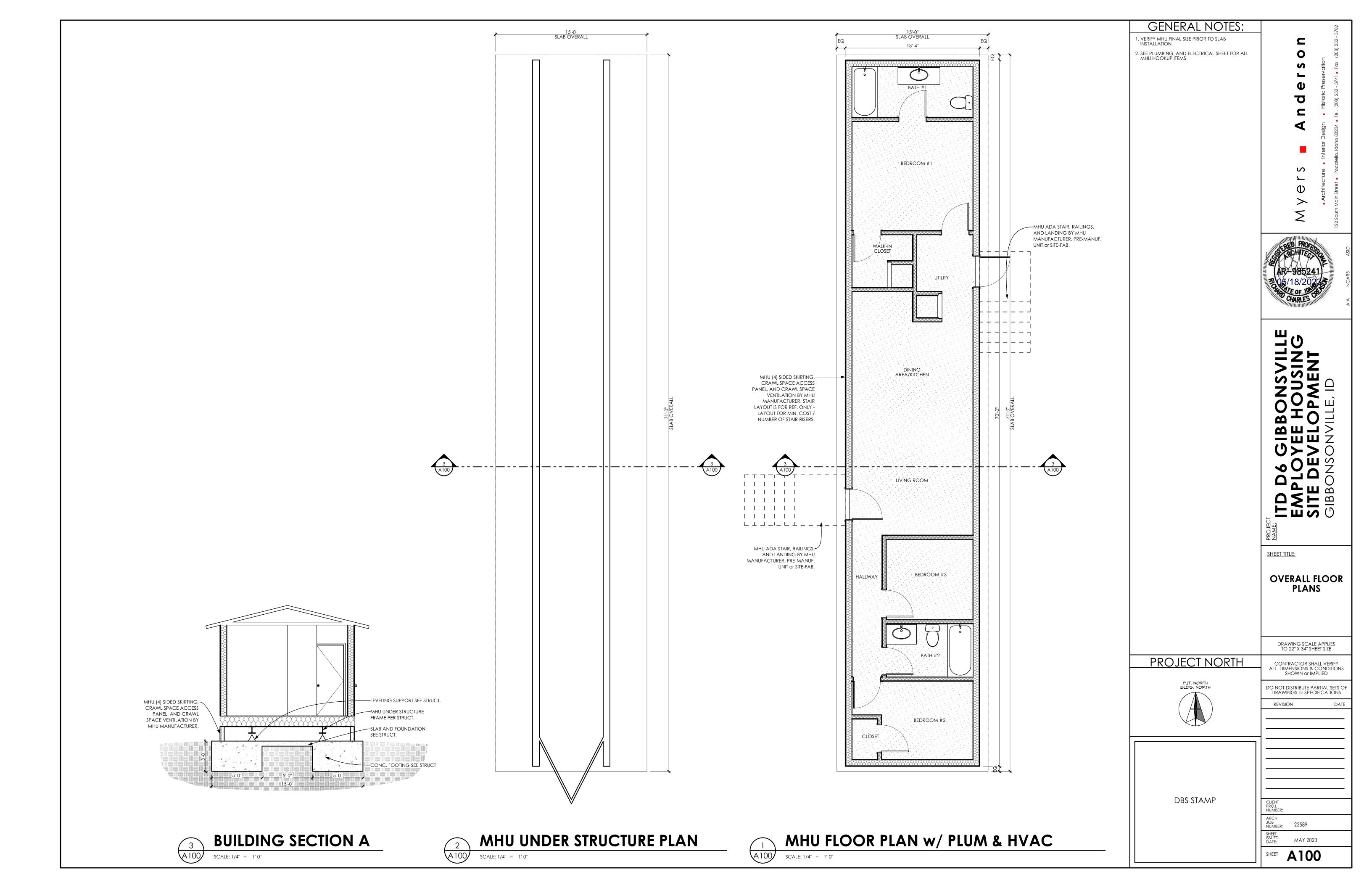
DEFERRED SUBMITTALS

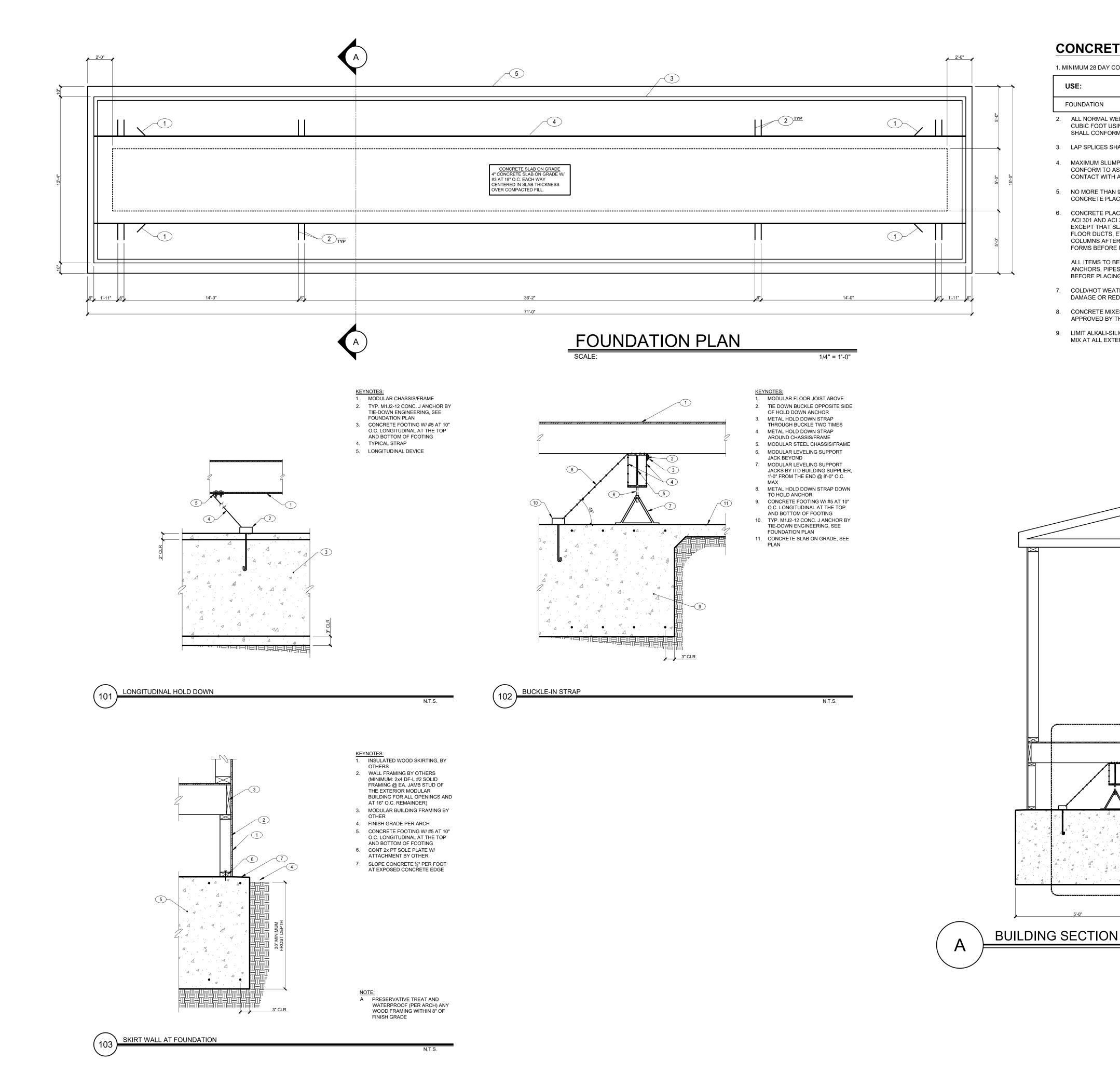
SCOPE. MHU TO BE SITE DELIVERED, HOOK-UP, CRAWL SPACE SKIRTING, AND LANDING WITH STAIRS BY MHU PROVIDER.

MHU OR MANUFACTURED HOME UNIT PURCHASED BY OWNER AND NOT IN CONTRACTOR'S









CONCRETE:

1. MINIMUM 28 DAY CONCRETE STRENGTH SHALL BE AS FOLLOWS:

USE:	CONCRETE	MAX W/C	AIR
	STRENGTH:	RATIO	ENTRAINMENT
FOUNDATION	4500 PSI	0.45	5.5% ± 1%

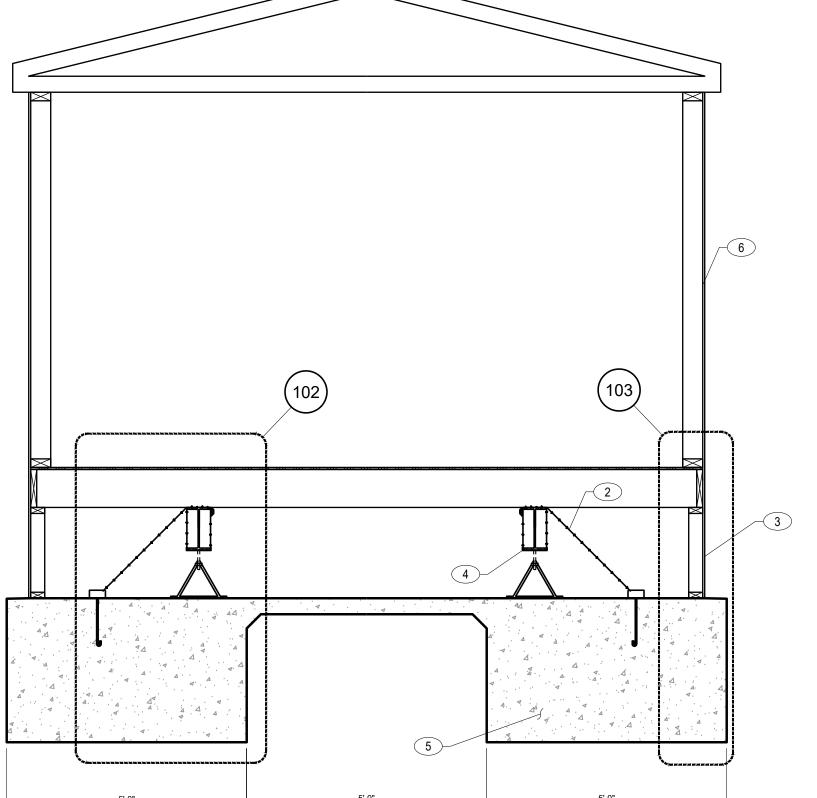
- ALL NORMAL WEIGHT CONCRETE SHALL BE REGULAR WEIGHT OF 150 POUNDS PER CUBIC FOOT USING HARD-ROCK AGGREGATES. AGGREGATE USED IN CONCRETE SHALL CONFORM TO ASTM C33.
- 3. LAP SPLICES SHALL BE 12" FOR #3 BAR AND 24" FOR #5 BAR.
- MAXIMUM SLUMP FOR ALL CONCRETE SHALL BE 6". PORTLAND CEMENT SHALL CONFORM TO ASTM C150. TYPE V CEMENT SHALL BE USED FOR CONCRETE IN CONTACT WITH ALKALINE SOIL, AND TYPE II ELSEWHERE.
- NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY THE TESTING AGENCY.
- CONCRETE PLACEMENT AND QUALITY SHALL BE PER RECOMMENDATIONS IN ACI 614, ACI 301 AND ACI 318. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND AND UNDER FLOOR DUCTS, ETC. CAST CLOSURE POUR, WHERE SHOWN ON PLANS AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONCRETE.
- ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCING, DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES, ETC., SHALL BE SECURELY POSITIONED IN THE FORMS BEFORE PLACING THE CONCRETE.
- COLD/HOT WEATHER CONCRETE CONSTRUCTION: PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH IN COMPLIANCE WITH ACI 305 AND 306.
- 8. CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER.
- LIMIT ALKALI-SILICA REACTION (ASR) TO 0.1% EXPANSION AT 28 DAYS IN CONCRETE MIX AT ALL EXTERIOR CONCRETE AND INTERIOR CONCRETE EXPOSED TO MOISTURE.

MODULAR BUILDING BY OTHER

(X PLAN KEYNOTES
1.	LONGITUDINAL HOLD DOWN ANCHOR, SEE DETAIL 101
2.	TRANSVERSE HOLD DOWN ANCHOR, SEE DETAIL 102
3.	PERIMETER SKIRT WALL BY OTHERS, SEE DETAIL 103
4.	MODULAR CHASSIS/FRAME BEAM BY OTHER
5.	CONCRETE FOOTING, SEE DETAILS

FOUNDATION PLAN NOTES

- VERIFY ALL DIMENSIONS WITH ALL ARCHITECTURAL DRAWINGS.
- THE DEPTH OF FOOTING DIMENSION INDICATED ON THE PLAN IS A MINIMUM. FOUNDATION CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO INSURE THAT THESE MINIMUMS ARE SUFFICIENT FOR THE WORK.
- WALLS WITH SOLID LINES DESIGNATED STRUCTURAL (BEARING) WALLS.
- STRUCTURE TO BE LEVELED AND MODULES FULLY SUPPORTED PRIOR TO THE INSTALLATION OF HOLD DOWNS. MODULAR UNITS W/ OUTRIGGERS EXTENDING PAST TRANSPORT RAIL IN EXCESS OF 30 INCHES SHALL BE SUPPORTED ALONG THE PERIMETER AT NOT MORE THAN 8'-0" O.C. SHIM AND BLOCK AS NECESSARY TO INTERFACE PIERS W/ FLOOR MEMBERS.
- LATERAL HOLD DOWNS SHALL BE TIE-DOWN ENGINEERING, INC. OR APPROVED EQUAL.
- ANCHOR SHALL BE INSTALLED AT THE LOCATION INDICATED ON THE DRAWINGS, WET SET INTO FLOWABLE FILL. THE ANCHOR HAS A MIN. ALLOWABLE HOLDING FORE OF 3,150 POUNDS (WORKING STRESS) HORIZONTAL & VERTICAL STABILIZER DEVICE REQ'D AT EACH ANCHOR.
- FOR SIDEWALK AND LANDING LOCATION, SEE ARCHITECTURAL DRAWINGS.
- THE SOIL DESIGN VALUE OF 1500 PSF HAS BEEN APPROVED BY THE CITY/COUNTY BUILDING DEPARTMENT, CONTINGENT THAT THE SOIL ON THE SITE PREDOMINATELY CONSISTS OF SAND AND/OR GRAVEL. SPECIFIC SOIL CLASSIFICATIONS SHOULD BE ONE OF THE FOLLOWING: SANDY GRAVEL OR GRAVEL(GW OR GP), SAND(SW AND SP), SILTY SAND(SM), CLAYEY SAND(SC), SILTY GRAVEL(GM), OR CLAYEY GRAVEL(GC). THESE SOIL CLASSIFICATIONS CAN BE FOUND IN TABLE 1806.2 OF CHAPTER 18 OF THE IBC. VERIFICATION OF SOIL CLASSIFICATION IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL FOUNDATIONS SHALL BEAR ON COMPACTED ENGINEERED FILL OR COMPETENT NATIVE SOIL SUBBASE COMPACTED TO 95% DRY DENSITY (STANDARD PROCTOR). GRADE IS DEFINED AS LOWEST ADJACENT GRADE WITHIN 5 FEET OF THE BUILDING FOR PERIMETER FOOTINGS. WHERE EXTERIOR PAVING OR CONCRETE IS DIRECTLY ADJACENT TO BUILDING, GRADE IS DEFINED AS TOP OF EXTERIOR PAVING AT LEAST 5 FEET FROM BUILDING. CONCRETE FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE OF LOOSE DEBRIS OR UN-COMPACTED MATERIAL AT TIME OF CONCRETE
- CONCRETE SLABS ON GRADE SHALL BE SUPPORTED ON A 4 INCH (MIN) LAYER OF FREE-DRAINING GRANULAR MAT (DRAINAGE FILL COURSE). THE MAT SHOULD CONSIST OF A WELL GRADED SAND AND GRAVEL MIXTURE WITH MAXIMUM 3/4-INCH CRUSHED AGGREGATE. THE GRANULAR MAT SHOULD BE COMPACTED TO NO LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698



1/2" = 1'0"

PROJECT MANAGER: DBP CAD OPERATOR: ADH

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ructural Engineering

JOB NO.: IF23-200

1020 E. Lincoln Road phone: 208.227.8404 Idaho Falls, ID 83401 fax: 208.227.8405

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VEL

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G B NG

SHEET TITLE:

FOUNDATION PLAN

> CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN OR IMPLIED

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

DRAWN

NUMBER: 22589 PROJECT 5/12/23

\$1.0

MECHANICAL ABBREVIATIONS					
	AIR CONDITIONING	KW	KILOWATT		
	ABOVE FINISHED FLOOR	KWH	KILOWATT HOUR		
AHU	AIR HANDLING UNIT				
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR	LAT	LEAVING AIR TEMPERATURE		
710111712	CONDITIONING ENGINEERS				
		LAV	LAVATORY		
	BRITISH THERMAL UNITS	LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN		
BTUH	BTUS PER HOUR	LWT	LEAVING WATER TEMPERATURE		
	COMBUSTION AIR	MAX	MAXIMUM		
	COOLING COIL	MCA	MINIMUM CIRCUIT AMPS		
	AIR FLOW RATE (CUBIC FEET PER MINUTE)	MOCP	MAXIMUM OVERCURRENT PROTECTION		
	CHILLED WATER RETURN	MIN	MINIMUM		
CHWS	CHILLED WATER SUPPLY				
	CEILING	NC	NOISE CRITERIA		
	COLD WATER	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		
		NTS	NOT TO SCALE		
DEG or °	DEGREE				
	DIAMETER	OSA	OUTSIDE AIR		
	DRY BULB				
		PD	PRESSURE DROP		
EA	EXHAUST AIR	PH or Ø	PHASE		
	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE		
	ENERGY EFFICIENCY RATIO	110	I NEGOCIAE NEBOCIAC VILEVE		
	EXTERNAL STATIC PRESSURE	RA	RETURN AIR		
	ENTERING WATER TEMPERATURE	RPM	REVOLUTIONS PER MINUTE		
	ENTERNITO WITTER TEMP ENTITIONE	RTU	ROOFTOP UNIT		
FCO	FLOOR CLEANOUT	11.10	INCOLLEGE CHAIL		
	FIRE DAMPER	SA	SUPPLY AIR		
	FULL LOAD AMPS	SEER	SEASONAL ENERGY EFFICIENCY RATIO		
	FLOOR	SFD	COMBINATION SMOKE/FIRE DAMPER		
	FEET PER MINUTE	SP	STATIC PRESSURE		
	FEET	SYM	SYMBOL		
11		OTIVI	STWIDOL		
GA	GAUGE	T&P	TEMPERATURE AND PRESSURE		
	GRADE CLEANOUT	TEMP	TEMPERATURE		
GPM	WATER FLOW RATE (GALLONS PER MINUTE)	TYP	TYPICAL		
GEIVI	WALLET LOW HATE (OALLONG I LIT WIIINOTE)	117	TIFIOAL		
	HEATING COIL	LIMC	UNIFORM MECHANICAL CODE		
	HORSE POWER	UMC UPC	UNIFORM PLUMBING CODE		
	HEATING, VENTILATING, AIR CONDITIONING				
		URL	URINAL		
	HOT WATER	\/TD	VENT TUDOUGU DOOF		
	HOT WATER SURDLY	VTR	VENT THROUGH ROOF		
HWS	HOT WATER SUPPLY	V	VOLTS		
IDO	INTERNATIONAL PUBLICACORE	14//	NA/IT I		
IBC	INTERNATIONAL BUILDING CODE	W/	WITH		
	INTERNATIONAL ENERGY CONSERVATION CODE	WB	WET-BULB		
	INTERNATIONAL FILE CAS CODE	WC	WATER CLOSET		
	INTERNATIONAL FUEL GAS CODE	WCO	WALL CLEANOUT		
	INTERNATIONAL MECHANICAL CODE	WH	WATER HEATER		
IPC	INTERNATIONAL PLUMBING CODE				
NOTE:	THIS IS A STANDARD LIST OF COMMONLY USED MECHANICAL.	ABBREVIAT	IONS. SOME OF THE ABBREVIATIONS SHOWN ABOVE MAY NOT		
NOTE:	BE USED IN THIS DRAWING PACKAGE.				

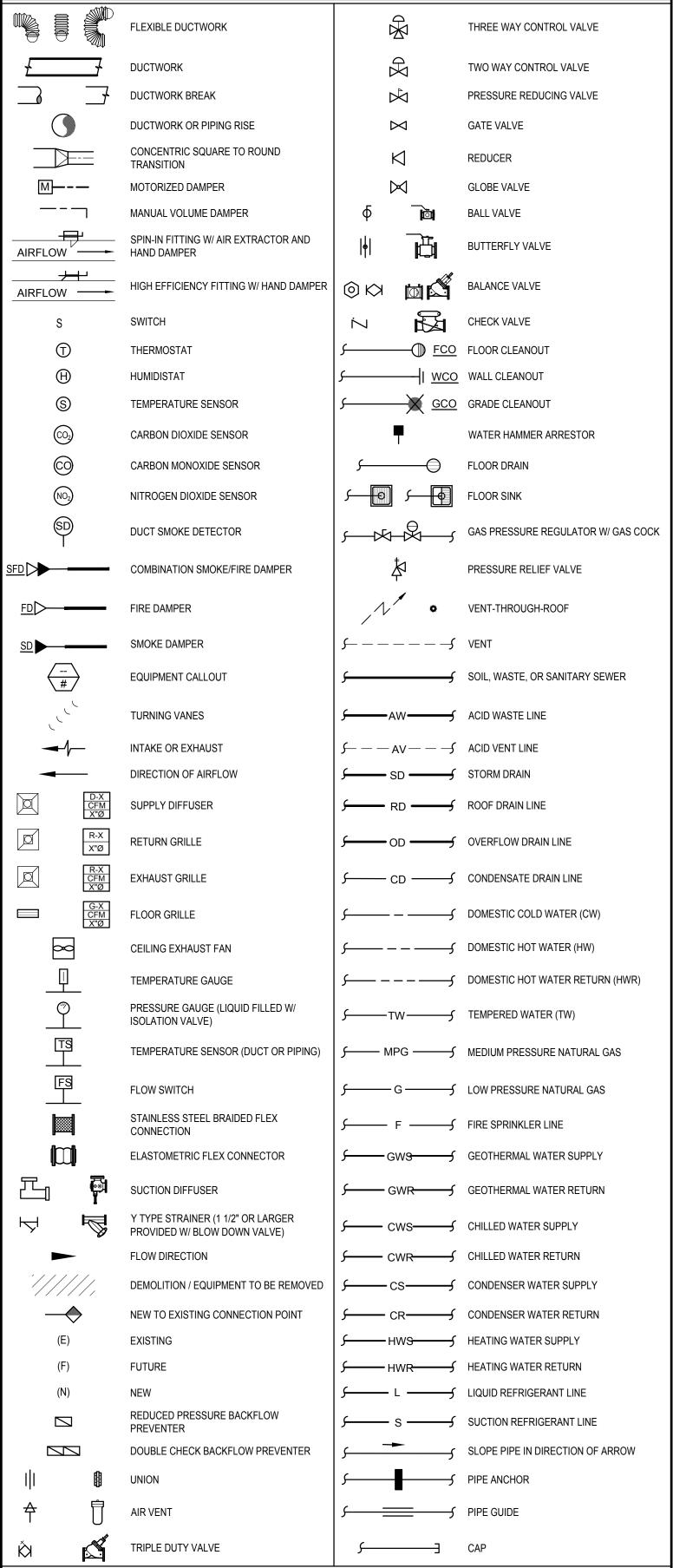
MECHANICAL GENERAL NOTES

- ALL MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE (IMC) LATEST EDITION, AND ALL LOCAL & STATE CODES.
- 2. ALL PLUMBING EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ADOPTED PLUMBING CODE,
- 3. ALL MECHANICAL AND PLUMBING EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
- MECHANICAL CONTRACTORS SHALL RECEIVE PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER BEFORE MAKING CUTS THROUGH ANY STRUCTURAL MEMBER.
- MECHANICAL CONTRACTORS SHALL COORDINATE INSTALLATION WITH CONSTRUCTION SUPERVISOR AND WITH ALL OTHER TRADES TO AVOID CONFLICTS.
- 6. THE MECHANICAL CONTRACTORS SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWINGS BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.
- 7. SEE MECHANICAL SCHEDULE SHEET FOR SCHEDULED CAPACITIES OF ALL MECHANICAL EQUIPMENT AND MATERIALS SPECIFIED.
- 8. DOMESTIC WATER SERVICE IS PROVIDED WITH A DOUBLE CHECK BACKFLOW PREVENTER.
- 9. ALL MECHANICAL EQUIPMENT TO BE PROPOSED MUST BE ON THE APPROVED LIST PRIOR TO SUBMITTALS. ALL APPROVED MANUFACTURERS MUST BE CAPABLE OF MEETING THE REQUIREMENTS OF THE SPECIFIED EQUIPMENT.
- 10. RUNOUT AND HOOKUP SIZES TO INDIVIDUAL PLUMBING FIXTURE CAN BE FOUND ON THE PLUMBING FIXTURE SCHEDULE.
- 11. PROVIDE REMOTE CEILING ACCESS BALANCE DAMPERS WITH CONCEALED CHROME PLATE COVERS FOR BALANCE DAMPERS
- 12. PAINT ALL VTR'S, FLUES, EXHAUST CAPS, AND OTHER MECHANICAL ITEMS ON THE ROOF TO MATCH THE ROOF COLOR.
- 13. INSULATED FLEXIBLE DUCTWORK MAY BE USED FOR RUNOUTS TO GRILLES AND DIFFUSERS, IN LENGTHS OF 6'-0" OR LESS.
- 14. MAINTAIN MINIMUM OF 10'-0" DISTANCE BETWEEN ALL FRESH AIR INTAKES AND EXHAUST OR GAS FLUE DISCHARGES.
- TECHNICIAN BEFORE THE USE OF THE BUILDING POTABLE WATER SYSTEM.

THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL BACKFLOW DEVICES TO BE INSPECTED BY A CERTIFIED BACKFLOW

- 16. LOCATE ACCESS HATCHES SO AS TO PROVIDE OPTIMUM SERVICEABILITY TO EQUIPMENT AND/OR VALVING. SEE ARCHITECTURAL SPECIFICATION FOR TYPE AND COLOR. COORDINATE LOCATION WITH STRUCTURAL & LIGHTING.
- 17. WHENEVER THERE IS A DISCREPANCY BETWEEN THE RUNOUT DUCT SIZE SHOWN ON THE PLANS AND THAT SHOWN IN THE SCHEDULE, ALWAYS USE THE LARGER OF THE TWO DUCT SIZES.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR VERIFICATION OF EXISTING JOB CONDITIONS PRIOR TO BID. NO ADDITIONAL COST SHALL BE AWARDED TO THE SUCCESSFUL CONTRACTOR (OR THEIR SUBCONTRACTORS) AFTER BIDS HAVE BEEN SUBMITTED AND CONTRACTS AWARDED FOR FAILURE TO VERIFY EXISTING FIELD CONDITIONS. DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION FOR ALTERNATIVE METHODS OF INSTALLATION PRIOR TO THE BIDDING OF THIS PROJECT.
- 19. UNLESS OTHERWISE NOTED ALL EXISTING MECHANICAL EQUIPMENT, PIPING, ETC, TO BE REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR UNDER THIS CONTRACT. THE OWNER SHALL RETAIN THE RIGHT TO KEEP ANY REMOVED ITEMS.
- 20. ALL DOMESTIC COLD AND HOT WATER LINES IN THE AREA OF WORK WHICH ARE NO LONGER IN USE DUE TO THIS PROJECT SHALL BE REMOVED BACK TO THE MAINS AND CAPPED.
- 21. HOLES IN EXISTING WALL OR FLOORS SHALL BE PATCHED TO MATCH EXISTING WHERE PIPING, DUCTWORK, ETC. WERE REMOVED OR ADDED DURING THIS PROJECT.
- 22. DAMAGE TO THE EXISTING FACILITY DURING THE CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

MECHANICAL AND PLUMBING DRAWINGS LEGEND



THIS IS A LIST OF COMMONLY USED MECHANICAL AND PLUMBING SYMBOLS. SOME OF THE SYMBOLS SHOWN ABOVE

MAY NOT BE USED IN THIS DRAWING PACKAGE.

NOTE:

ENERGY CODE COMPLIANCE

- COMPLIANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE IS REQUIRED FOR THIS PROJECT. THESE NOTES COVER MANDATORY REQUIREMENTS OF THE CODE. ADDITIONAL REQUIREMENTS ARE NOTED ON THE DRAWINGS AND IN THE SPECIFICATIONS.
- MINIMUM REQUIREMENTS FOR SUPPLY AND RETURN DUCTWORK INSULATION:
 - 1. R-6: DUCTS LOCATED IN UNCONDITIONED SPACES (SPACE NEITHER HEATED NOR COOLED SUCH AS ABOVE CEILING SPACES, WALL SPACES, DUCT CHASES, SOFFITS, ATTICS, CRAWL SPACES, UNHEATED BASEMENTS, AND UNHEATED GARAGES).
 - 2. R-12: DUCTS LOCATED OUTSIDE OF THE BUILDING'S INSULATION ENVELOPE (SUCH AS ABOVE THE ATTIC INSULATION).

TYPICAL INSULATION THICKNESS REQUIRED TO MEET THESE REQUIREMENTS:

- DUCT WRAP:
- R-12 = 4"
- 2. DUCT LINER: R-6 = 1-1/2"
- CONTRACTOR SHALL VERIFY WITH THE MANUFACTURER, THE R-VALUES OF THE ACTUAL INSULATION USED. R-VALUES SHALL BE INSTALLED VALUES.
- WHERE DUCTS USED FOR COOLING ARE EXTERNALLY INSULATED, THE INSULATION SHALL BE COVERED WITH A VAPOR RETARDER HAVING A MAXIMUM PERMEANCE OF 0.05 PERM OR ALUMINUM FOIL HAVING A MINIMUM THICKNESS OF 2 MILS. INSULATION HAVING A PERMEANCE OF 0.05 PERMS OR LESS SHALL NOT BE REQUIRED TO BE COVERED. ALL JOINTS AND SEAMS SHALL BE SEALED TO MAINTAIN THE CONTINUITY OF THE VAPOR RETARDER.
- ALL DUCT JOINTS, SEAMS, AND CONNECTIONS SHALL BE FASTENED AND SEALED WITH WELDS, GASKETS, ADHESIVES. MASTIC-PLUS-EMBEDDED-FABRIC SYSTEMS, OR TAPES. TAPES AND MASTICS SHALL BE LISTED AND LABELED PER UL181A OR UL181B. DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS. DUCT CONNECTIONS TO FLANGES OR EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED.
- DOMESTIC HOT WATER PIPING SYSTEMS SHALL BE INSULATED WITH 1" INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU-INCH/HOUR-FT2-°F.
- DOMESTIC WATER HEATERS WHICH ARE NOT PROVIDED WITH INTEGRAL HEAT TRAPS AND SERVE NONCIRCULATING SYSTEMS SHALL BE PROVIDED WITH HEAT TRAPS ON THE SUPPLY AND DISCHARGE PIPING AT THE WATER HEATER.
- DOMESTIC HOT WATER SYSTEMS WITH RECIRCULATION PUMPS OR ELECTRIC HEAT TRACE SHALL BE CONTROLLED WITH 7-DAY TIME
- AN OPERATING AND MAINTENANCE MANUAL SHALL BE PROVIDED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY. THE O&M MANUAL SHALL CONTAIN THE FOLLOWING INFORMATION AS A MINIMUM:

1. EQUIPMENT CAPACITY (INPUT & OUTPUT).

- 2. EQUIPMENT OPERATING AND MAINTENANCE INSTRUCTIONS.
- 3. CONTROL SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCES.
- 4. CONTROL SYSTEM SETPOINTS SHALL BE SHOWN ON CONTROL DRAWINGS, AT CONTROL DEVICES, OR IN PROGRAMMING COMMENT ON DDC SYSTEMS.
- 5. A COMPLETE WRITTEN NARRATIVE ON HOW EACH MECHANICAL SYSTEM IS INTENDED TO OPERATE.



MUSGROVE ENGINEERING, P.A. 234 S. Whisperwood Way Boise, ID 83709 208.384.0585 645 West 25th Street Idaho Falls, ID 83402 208.523.2862 www.musgrovepa.com Project No. 23-182

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E A S

SHEET TITLE:

MECHANICAL PLANS

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN or IMPLIED

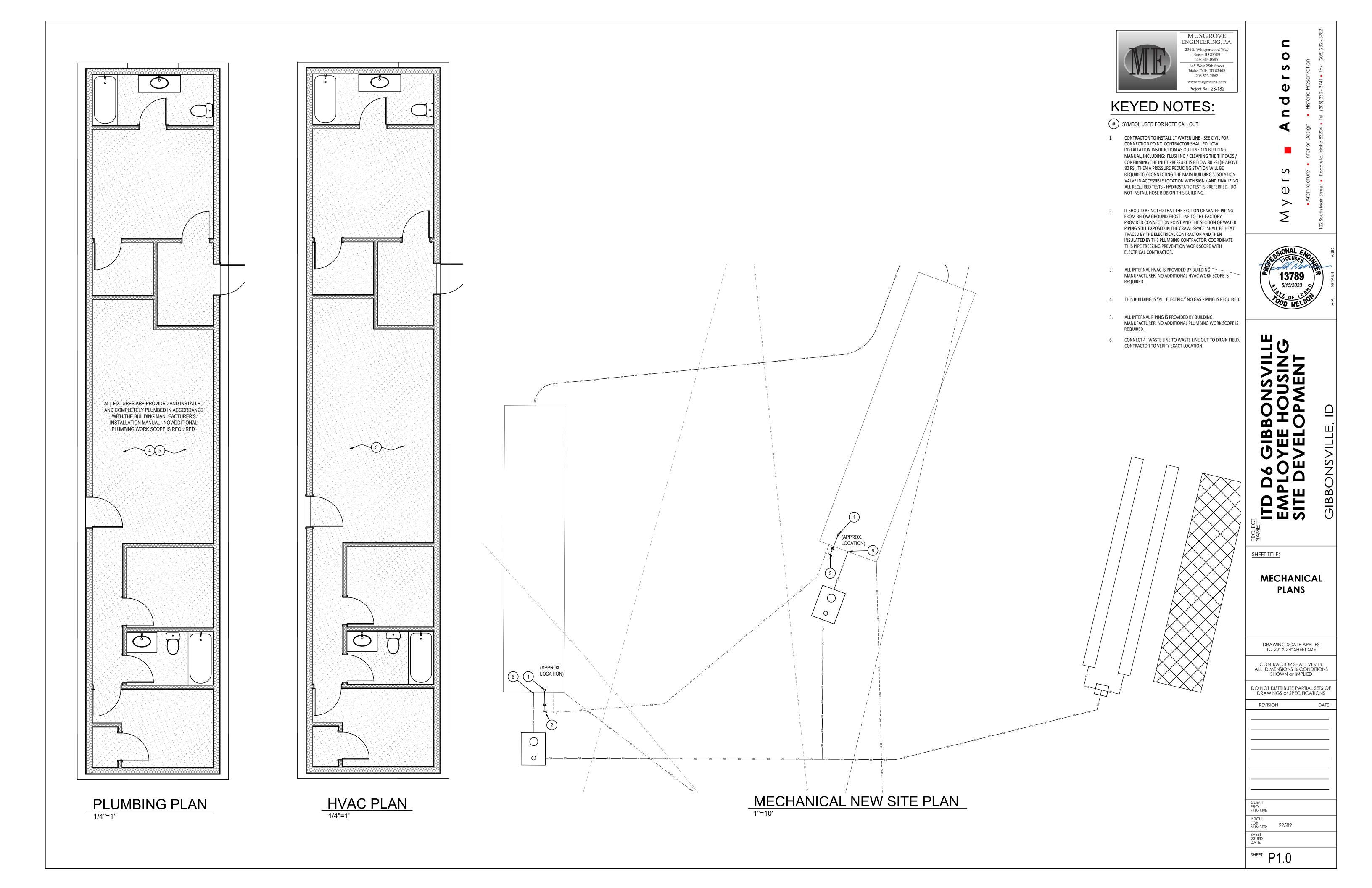
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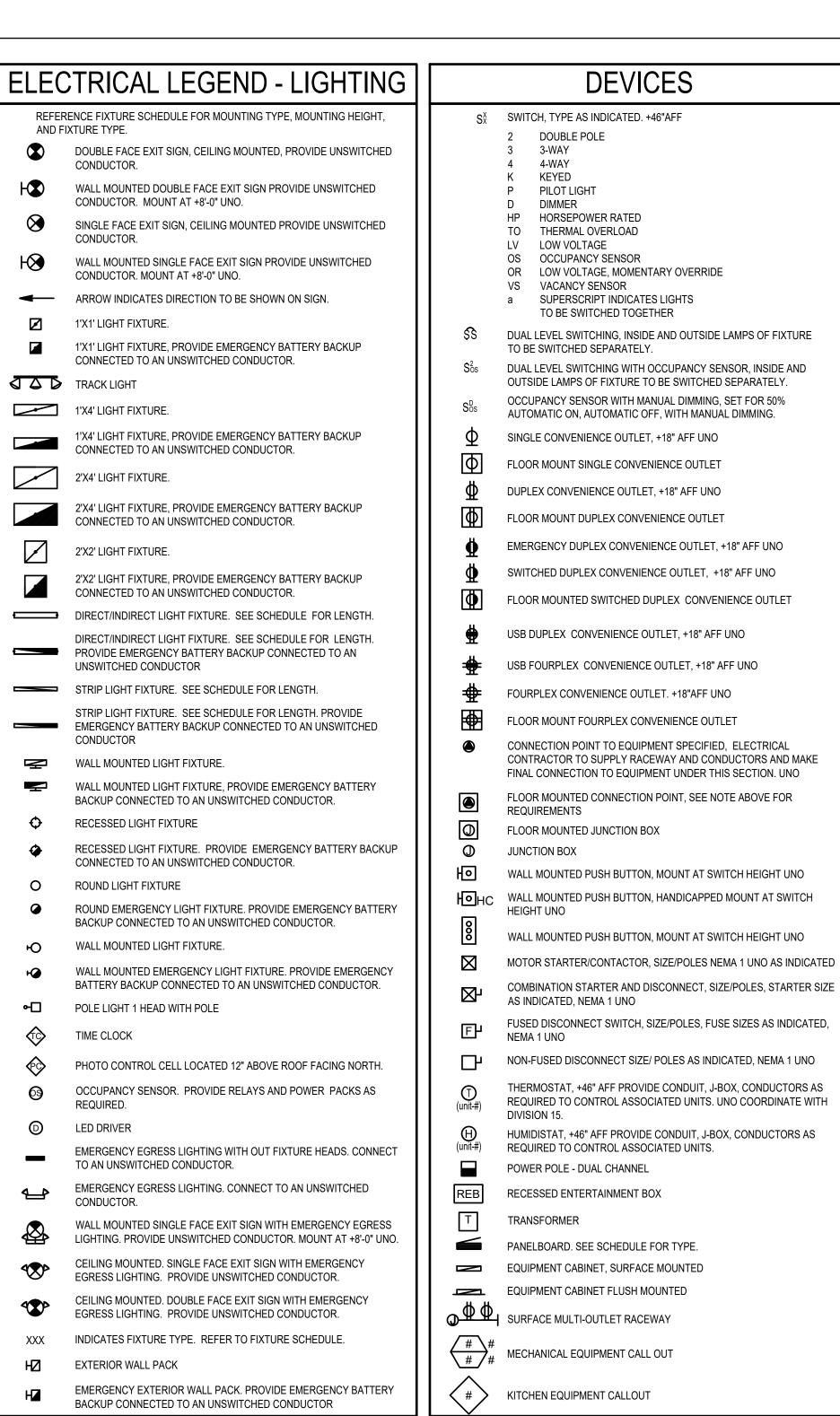
REVISION DATE

22589

ARCH. JOB NUMBER:

SHEET PO.0





CIRCUITING SYMBOLS

CURRENT CARRYING

NEUTRAL CONDUCTORS

— GROUNDING CONDUCTOR

— PANEL NAME

— CIRCUIT #

PANEL HOMERUN. (3/4"-2#12,1#12G CONDUCTORS UNO) 1"-4#10.1#10G

EDISON STYLE SHARED NEUTRAL CONDUCTORS ARE NOT ALLOWED.

EACH 1 POLE BREAKER SHALL BE FURNISHED WITH AN INDIVIDUAL

DEDICATED NEUTRAL CONDUCTOR.

CONDUCTORS

DESIGNATES CIRCUIT ON -

CEILING OR WALL, MAINTAIN

CONDUIT AND CONDUCTOR SIZE

THROUGHOUT ENTIRE CIRCUIT.

BEGINNING OF INDIVIDUAL ——

CIRCUIT(S), CIRCUIT NUMBER(S)

CONDUIT DOWN &

UNMARKED CIRCUIT IS CONCEALED IN ———

○ CONDUIT UP

CONDUIT, STUBBED, CAPPED AND MARKED

WITH PULL CORD AS SPECIFIED

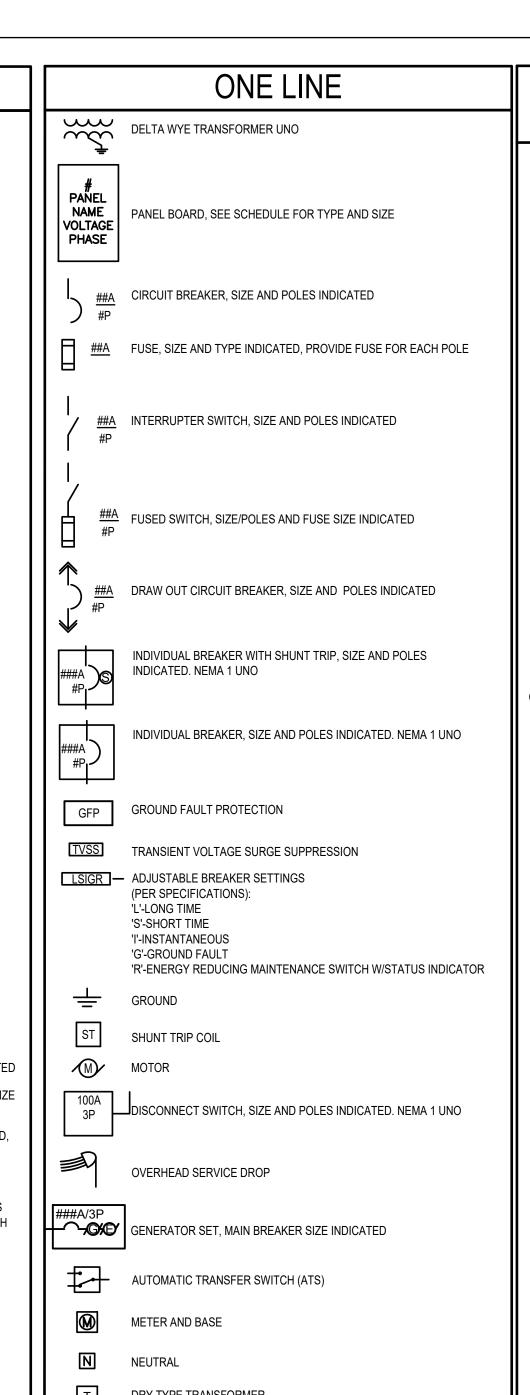
- CONCEALED IN FLOOR OR

UNDERGROUND

EMERGENCY SOURCE

INDICATED.

EXISTING -



DRY TYPE TRANSFORMER

PAD MOUNT TRANSFORMER

CO CT CTL

ELECTRICAL ABBREVIATIONS

- AMPERES 6" ABOVE BACKSPLASH ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- AMPS INTERRUPTING CAPACITY
- AUTOMATIC TRANSFER SWITCH AMERICAN WIRE GAUGE
 - BOTTOM OF DECK
 - **BOTTOM OF STRUCTURE**
 - **CEILING MOUNTED**
 - CIRCUIT BREAKER CF COMPACT FLUORESCENT
 - CKT CIRCUIT
 - CONDUIT ONLY, PROVIDE PULL-LINE CURRENT TRANSFORMER
 - CONTROL
 - DEMOLITION
 - DEMO DEMOLITION
 DET DETAIL
 DTT DOUBLE TWIN DOUBLE TWIN TUBE
 - **EMERGENCY** EXISTING
 - **ELECTRICAL CONTRACTOR EMERGENCY LIGHT**
 - FUTURE
 - FACP FIRE ALARM CONTROL PANEL

 - GROUND FAULT CIRCUIT INTERRUPTER
 - GROUND FAULT INTERRUPTER
 - HAND HOLE HIGH INTENSITY DISCHARGE HAND-OFF-AUTO
 - HIGH PRESSURE SODIUM
 - HVAC HEATING, VENTILATION, & AIR CONDITIONING
 - ISOLATED GROUND IPCO IDAHO POWER COMPANY
 - J-BOX JUNCTION BOX
 - KVA KILO VOLT-AMP KWH KILOWATT HOUR
 - LCP LIGHTING CONTROL PANEL
 - MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MAIN DISTRIBUTION PANEL
 - MAIN LUGS ONLY MMC MH MODULAR METERING CENTER METAL HALIDE
 - MAIN SWITCH BOARD MOUNTING
 - NEW NORMALLY CLOSED NEC
 - NATIONAL ELECTRICAL CODE NOT IN CONTRACT NIGHT LIGHT
 - NORMALLY OPEN NTS NOT TO SCALE
 - OVERHEAD OCCUPANCY SENSOR
 - PC PHOTO-CONTROL PVC POLYVINYL CHLORIDE PWR POWER
 - REFERENCE RECEPTACLE
 - RELOCATED
 - SF SQUARE FEET
 - TBD TO BE DETERMINED TDR TIME DELAY RELAY TK TOE KICK
 - TSP TWISTED SHIELDED PAIR TRT TRIPLE TUBE TTB TELEPHONE TERMINAL BOARD (TYP.) TYPICAL
 - UNDERCABINET UG UNDERGROUND
 - U.N.O. UNLESS NOTED OTHERWISE
 - VA VOLT-AMPERE
 - W WATT WG WIRE GUARD WP WEATHER PROOF/NEMA 3R

PROVIDED/ PROVIDE AND INSTALL / PROVIDED AND PROVIDE BY INSTALLED BY / PROVIDE AND INSTALL INSTALLED/ INSTALL

THIS IS A STANDARD LIST OF COMMONLY USED ELECTRICAL ABBREVIATIONS. SOME OF THE ABBREVIATIONS SHOWN ABOVE MAY NOT BE USED IN THIS DRAWING PACKAGE.

ELECTRICAL SPECIFICATIONS

- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE LOCALLY ADOPTED ELECTRICAL CODE. ALL LOCAL CODES. AND TO THE FULL ACCEPTANCE OF THE AUTHORITY HAVING JURISDICTION.
- OBTAIN ALL PERMITS, COORDINATE, FURNISH, INSTALL, CONNECT AND TEST ALL ELECTRICAL EQUIPMENT REQUIRED FOR ALL THE SYSTEMS INSTALLED UNDER THIS CONTRACT TO INSURE COMPLETE AND FULLY OPERATIONAL
- CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF AS-BUILT DRAWINGS. AS-BUILT SET OF DRAWINGS SHALL BE UPDATED DAILY AND SHALL DOCUMENT THE ACTUAL INSTALLED CONDITION OF THE ENTIRE ELECTRICAL INSTALLATION. AS-BUILT SET OF DRAWINGS SHALL BE AVAILABLE AT ALL TIMES ON THE SITE FOR INSPECTION BY CODE OFFICIALS, OWNER, ARCHITECT, AND ENGINEER.
- PROTECT ALL EXISTING WORK FROM DAMAGE DURING CONSTRUCTION.
- DESIGN IS BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS TO DETERMINE STATUS OF ACTUAL CONDITIONS AS THEY RELATE TO THE SCOPE OF WORK AS SHOWN ON THESE
- COORDINATE ALL ELECTRICAL WORK WITH ALL OTHER TRADES
- COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS OF ALL ELECTRICAL EQUIPMENT AND DEVICES WITH THE ARCHITECTURAL ELEVATIONS AND DETAILS PRIOR TO ROUGH-IN.
- DEMOLITION WORK IS A PART OF THIS PROJECT. SEE DRAWINGS FOR EXISTING ELECTRICAL DEVICES TO BE REMOVED. REMOVE ASSOCIATED BOXES, RACEWAYS AND CONDUCTORS BACK TO SOURCE, AND MAKE SAFE.
- ALL MATERIALS AND EQUIPMENT FURNISHED TO THE PROJECT SHALL BE NEW AND SHALL BEAR THE LISTING LABEL OF A NATIONALLY RECOGNIZED TESTING LAB AS DEFINED BY OSHA.
- ALL ELECTRICAL DEVICES AND TERMINALS SHALL BE RATED 75°C MINIMUM.
- ALL CONDUCTORS SHALL BE STRANDED COPPER, 600 VOLT RATED. INSULATION TYPE SHALL BE THHN/THWN, FULLY COLOR CODED WITH GAUGE TYPE AND MANUFACTURER MARKED EVERY 24" ALONG. CONDUCTOR COLOR CODE SHALL BE AS FOLLOWS:

208Y/120 VOLT SYSTEM	480Y/277 VOLT SYSTEM
PHASE A - BLACK	PHASE A - BROWN
PHASE B - RED	PHASE B - ORANGE
PHASE C - BLUE	PHASE C - YELLOW
NEUTRAL - WHITE	NEUTRAL - GRAY
GROUND - GREEN	GROUND - GREEN

- MINIMUM SIZE WIRE FOR POWER AND LIGHTING CIRCUITS SHALL BE #12 AWG. ALL POWER AND LIGHTING CONDUCTORS SHALL BE ROUTED IN 3/4" CONDUIT
- EMT OR MC TYPE CABLE IS ALLOWED WHEN CONCEALED IN INTERIOR SPACES. MC TYPE CABLE IS NOT ALLOWED FOR HOMERUNS.
- MAKE ALL CONNECTIONS TO EQUIPMENT PER MANUFACTURER'S REQUIREMENTS.
- ALL EQUIPMENT, SWITCHING DEVICES AND PANELS SHALL BE MOUNTED SO AS TO BE ACCESSIBLE AND SHALL BE MOUNTED PLUMB AND SQUARE WITH
- DEVICES AND RACEWAYS PENETRATING FIRE RATED WALLS AND FLOORS SHALL BE SEALED WITH FIRE RESISTIVE MATERIAL, COMPATIBLE WITH CONSTRUCTION PENETRATED, TO MAINTAIN RATING OF THE WALL. SEALANT SYSTEM SHALL BE A U.L. APPROVED SYSTEM AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- Q. FURNISH AND INSTALL PULL CORD IN ALL EMPTY CONDUITS.
- ALL JUNCTION BOX COVERS WITH POWER WIRING SHALL HAVE THE PANEL AND CIRCUIT LABELED ON THE OUTSIDE SURFACE. ALL LABELS FOR EXPOSED JUNCTION BOXES IN "FINISHED AREAS" SHALL BE LABELED UTILIZING SELF ADHESIVE LABELS PRODUCED BY A MECHANICAL LABELING MACHINE. LABELS FOR JUNCTION BOX COVERS IN CONCEALED LOCATIONS SHALL CONSIST OF THE INFORMATION BEING NEATLY HANDWRITTEN ON THE OUTSIDE SURFACE OF THE COVER WITH A PERMANENT STYLE MARKER.
- CLEARLY LABEL ALL ACCESSIBLE CONDUIT STUBS WITH SYSTEM NAME AND LOCATION (ROOM NUMBER) WHERE THE OTHER END OF THE CONDUIT TERMINATES. USE INDELIBLE INK. THE LABELS SHALL BE LOCATED ON THE CONDUIT IN A POSITION THAT CAN BE EASILY READ.
- ALL 1 POLE BREAKER CIRCUITS SHALL HAVE AN INDEPENDENT NEUTRAL CONDUCTOR. NO EDISON STYLE SHARED NEUTRAL CONDUCTORS ARE
- ALL CONDUCTORS IN ELECTRICAL PANELS, CABINETS AND EQUIPMENT SHALL BE NEATLY TRAINED AND LACED.
- THE CONTRACTOR SHALL PROVIDE UPDATED CIRCUIT PANEL DIRECTORIES FOR ALL PANELS. DIRECTORIES SHALL BE TYPED.
- PROVIDE ELECTRICAL SUBMITTALS FOR EQUIPMENT SHOWN AS REQUIRED BY DIVISION 1 SPECIFICATIONS.
- ELECTRICAL CONTRACTOR SHALL OBTAIN THE AVAILABLE FAULT CURRENT VALUE FROM THE LOCAL UTILITY OR THE ONE-LINE DIAGRAM AND LABEL THE MAIN BREAKER WITH THAT VALUE.
- SWITCH AND RECEPTACLE LABELING: IDENTIFY PANELBOARD AND CIRCUIT NUMBER FROM WHICH DEVICES ARE SERVED. USE MACHINE PRINTED LABEL AND 1/8" TEXT. INSTALL ON THE OUTSIDE OF THE FACEPLATE FOR RECEPTACLES AND INSIDE THE FACEPLATE FOR SWITCHES.



ELECTRICAL GENERAL NOTES

- THESE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE; THEREFORE, THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL EQUIPMENT AND DEVICE LOCATIONS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING DIVISIONS PRIOR TO ROUGH-IN. REFER TO AND COORDINATE WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL WORK THAT IS REQUIRED BY THE ELECTRICAL CONTRACTOR.
- ALL CONDUIT AND JUNCTION BOXES ARE TO BE CONCEALED UNLESS LOCATED WITHIN DEDICATED ELECTRICAL OR MECHANICAL ROOMS. USE OF SURFACE MOUNTED RACEWAYS IN ALL OTHER SPACES MUST BE APPROVED BY THE ARCHITECT FOR EACH LOCATION. WHERE SURFACE RACEWAYS ARE APPROVED, UTILIZE WIREMOLD, OR APPROVED EQUAL, SURFACE MOUNTED RACEWAYS PAINTED TO MATCH SURROUNDING WALLS.
- REFER TO ARCHITECTURAL ELEVATIONS FOR OUTLET HEIGHTS WHERE THE SPECIFIC OUTLET HEIGHT IS NOT INDICATED. REFER TO THE ELECTRICAL LEGEND FOR THE DEFAULT OUTLET HEIGHT WHEN NOT INDICATED ON ELEVATIONS OR ON AT THE DEVICES.
- PROVIDE PULL-LINE IN ALL EMPTY CONDUITS.
- TERMINATE ALL LOW-VOLTAGE CONDUITS WITH INSULATED THROAT BUSHING.
- MECHANICAL EQUIPMENT INDICATED IS SHOWN IN AN APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.





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SHEET TITLE:

COVER SHEET

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS

SHOWN or IMPLIED

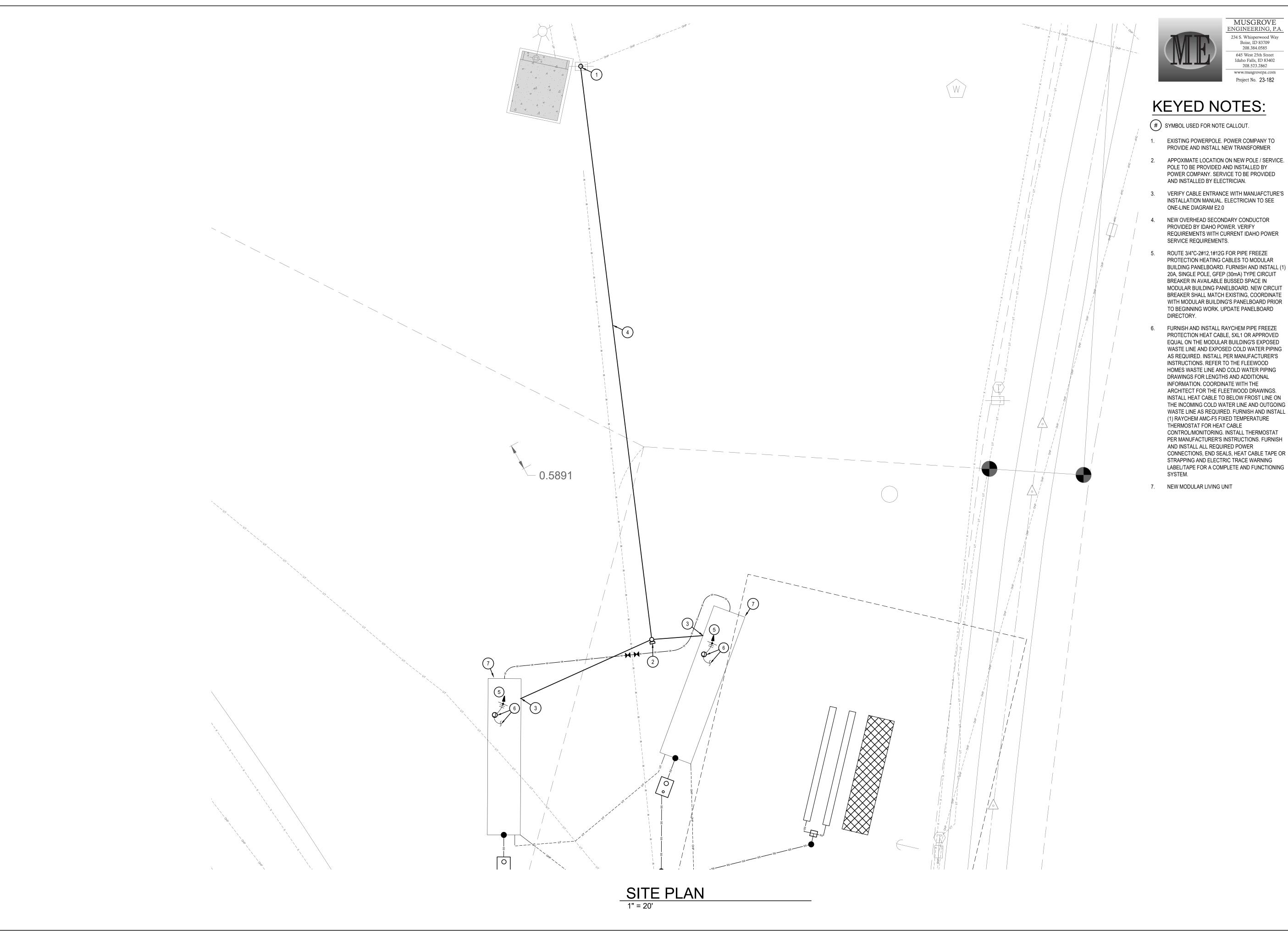
DO NOT DISTRIBUTE PARTIAL SETS OF DRAWINGS or SPECIFICATIONS

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- BUILDING PANELBOARD. FURNISH AND INSTALL (1) MODULAR BUILDING PANELBOARD. NEW CIRCUIT BREAKER SHALL MATCH EXISTING, COORDINATE WITH MODULAR BUILDING'S PANELBOARD PRIOR
- PROTECTION HEAT CABLE, 5XL1 OR APPROVED EQUAL ON THE MODULAR BUILDING'S EXPOSED WASTE LINE AND EXPOSED COLD WATER PIPING AS REQUIRED. INSTALL PER MANUFACTURER'S INSTALL HEAT CABLE TO BELOW FROST LINE ON THE INCOMING COLD WATER LINE AND OUTGOING WASTE LINE AS REQUIRED. FURNISH AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. FURNISH CONNECTIONS, END SEALS, HEAT CABLE TAPE OR LABEL/TAPE FOR A COMPLETE AND FUNCTIONING



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SHEET TITLE:

ELECTRICAL SITE PLAN

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN or IMPLIED

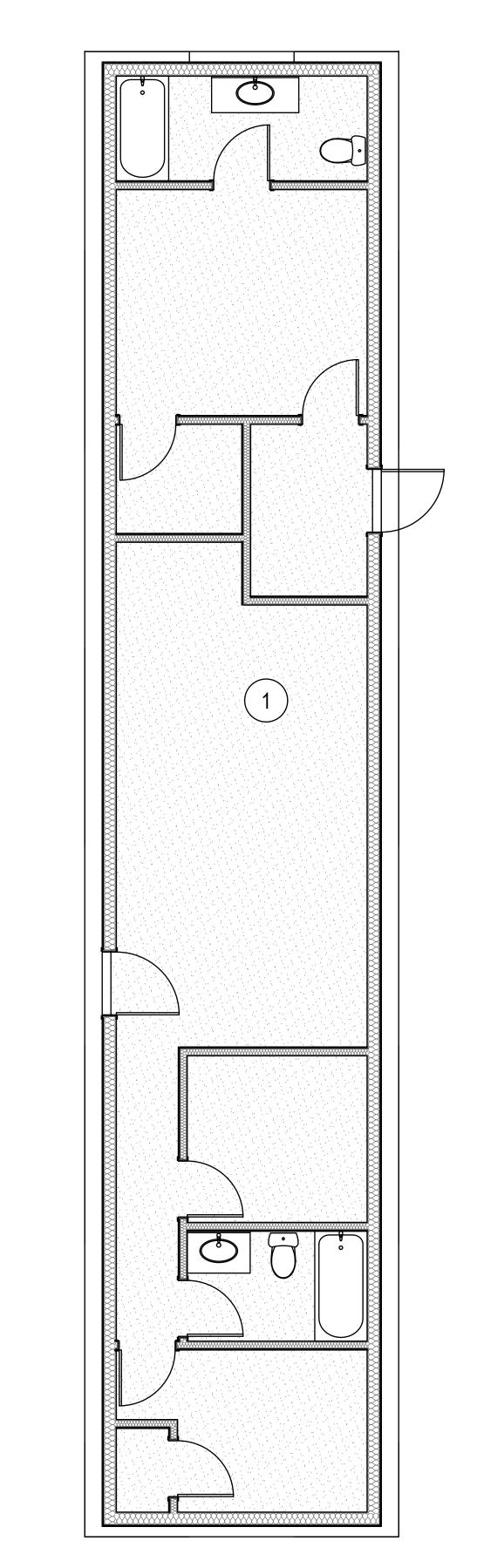
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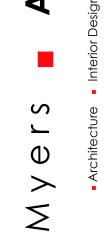


KEYED NOTES:

(#) SYMBOL USED FOR NOTE CALLOUT.

ALL FIXTURES ARE PROVEDED AND INSTALLED IN
 ACCORDANCE WITH THE BUILDING MANUFACTURE'S
 INSTALLATION MANUAL. NO ADDITIONAL WORK SCOPE IS
 REQUIRED





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SHEET TITLE:

POWER PLAN

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

Contractor shall verify all dimensions & conditions shown or implied

DO NOT DISTRIBUTE PARTIAL SETS OF DRAWINGS or SPECIFICATIONS

REVISION

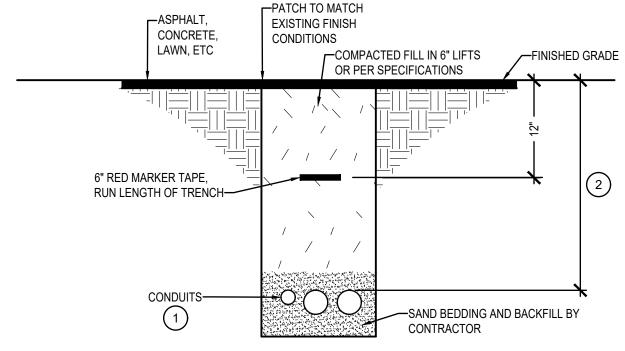
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POWER PLAN

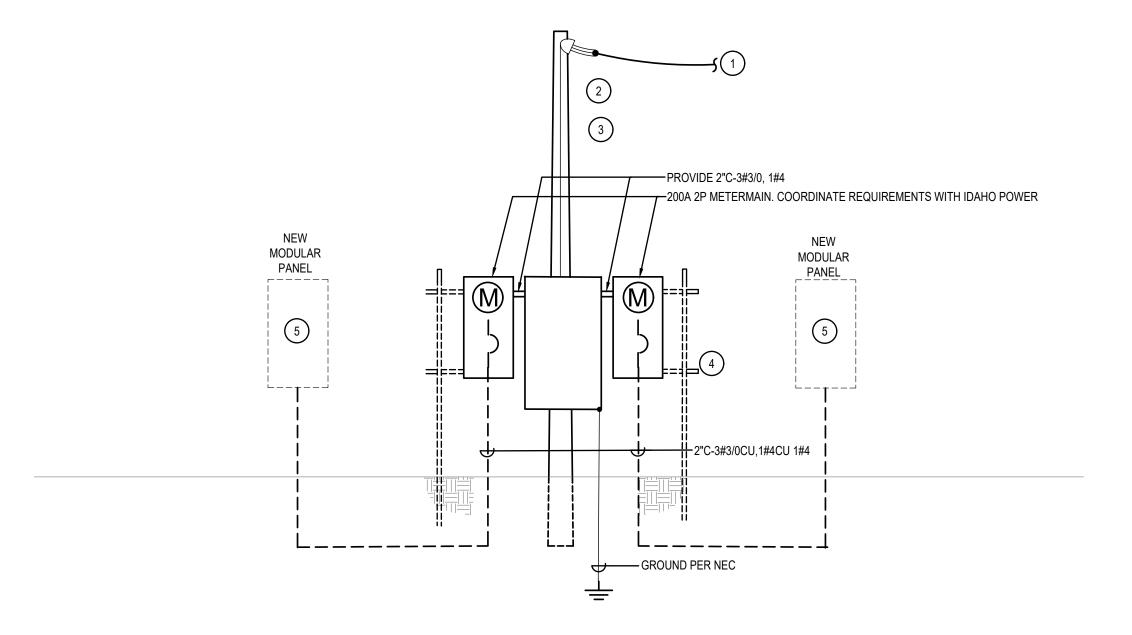




DETAIL NOTES:

- # SYMBOL USED FOR NOTE CALLOUT.
- 1. IF MULTIPLE CONDUITS SHARE TRENCH, PROVIDE SPACING BETWEEN CONDUITS. PROVIDE ZIP TIES, AND TIE ALL CONDUITS TOGETHER TO ENSURE STABILITY.
- 2. BURIAL DEPTH TO BE VERIFIED WITH UTILITIES AND AUTHORITY HAVING JURISDICTION: ELECTRICAL FEEDERS, COMMUNICATIONS: 24" MINIMUM UNDERGROUND SECONDARY: 30" MINIMUM UNDERGROUND PRIMARY: 42" MINIMUM

TRENCH DETAIL



ONELINE DIAGRAM NTS

DETAIL NOTES:

SYMBOL USED FOR NOTE CALLOUT.

- OVERHEAD UTILITY CONDUCTORS TO WEATHERHEADS BY IDAHO POWER COMPANY. SHOWN FOR REFERENCE ONLY.
- 2. NEW CERTIFIED WOOD POLE PROVIDED AND INSTALLED BY IDAHO POWER. COORDINATE WITH IDAHO POWER PRIOR TO BEGINNING WORK.
- 3. FURNISH AND INSTALL PARALLEL RUNS OF 2" CONDUIT EACH WITH 3#3/0 COPPER CONDUCTORS FROM THE METER PACK UP WOOD POLE TO WEATHERHEADS AS REQUIRED.
- 4. FURNISH AND INSTALL STRUT RACK FOR MOUNTING ELECTRICAL EQUIPMENT SHOWN. REFER TO THE ELECTRICAL SITE PLAN FOR LOCATION AND ADDITIONAL INFORMATION.
- 5. MODULAR BUILDING PANELBOARD. REFER TO THE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.



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ITD D6 GIBBONSVIL EMPLYEE HOUSING SITE DEVELOPMENT

SHEET TITLE:

ONELINE DIAGRAM

& TRENCH DETAIL

DRAWING SCALE APPLIES TO 22" X 34" SHEET SIZE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS SHOWN or IMPLIED

DO NOT DISTRIBUTE PARTIAL SETS OF DRAWINGS or SPECIFICATIONS

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